

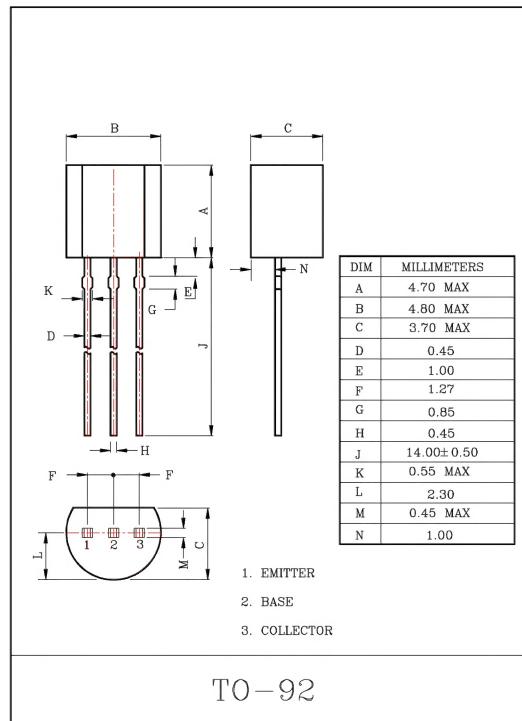
HIGH SPEED SWITCHING APPLICATION.

FEATURES

- High Frequency Characteristics  
 $f_T = 500\text{MHz}$  (Min.) ( $V_{CE}=10\text{V}$ ,  $f=100\text{MHz}$ ,  $I_C=10\text{mA}$ ).
- Excellent Switching Characteristics.
- KTN2369/2369A Electrically Similar to 2N2369/2369A.

MAXIMUM RATINGS (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	40	V
Collector-Emitter Voltage	$V_{CEO}$	15	V
Emitter-Base Voltage	$V_{EBO}$	4.5	V
Collector Current	$I_C$	500	mA
Collector Power Dissipation (Ta=25°C)	$P_C$	625	mW
Junction Temperature	$T_j$	150	°C
Storage Temperature Range	$T_{stg}$	-55~150	°C



# KTN2369/A

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## ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I <sub>CBO</sub>	V <sub>CB</sub> =20V, I <sub>E</sub> =0	-	-	0.4	μA
			V <sub>CB</sub> =20V, I <sub>E</sub> =0, Ta=125°C	-	-	30	
Collector-Base Breakdown Voltage		V <sub>(BR)CBO</sub>	I <sub>C</sub> =10μA, I <sub>E</sub> =0	40	-	-	V
Collector-Emitter * Breakdown Voltage		V <sub>(BR)CEO</sub>	I <sub>E</sub> =10mA, I <sub>B</sub> =0	15	-	-	
Emitter-Base Breakdown Voltage		V <sub>(BR)EBO</sub>	I <sub>E</sub> =10μA, I <sub>C</sub> =0	4.5	-	-	
DC Current Gain *	KTN2369	h <sub>FE</sub>	I <sub>C</sub> =10mA, V <sub>CE</sub> =1.0V	40	-	120	
	KTN2369A			-	-	120	
	KTN2369		I <sub>C</sub> =10mA, V <sub>CE</sub> =1.0V, Ta=-55°C	20	-	-	
	KTN2369A		I <sub>C</sub> =10mA, V <sub>CE</sub> =0.35V, Ta=-55°C	20	-	-	
	KTN2369		I <sub>C</sub> =100mA, V <sub>CE</sub> =2.0V	20	-	-	
	KTN2369A		I <sub>C</sub> =100mA, V <sub>CE</sub> =1.0V	20	-	-	
Collector-Emitter * Saturation Voltage		V <sub>CE(sat)</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =1.0mA	-	-	0.25	V
Base-Emitter * Saturation Voltage		V <sub>BE(sat)</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =1.0mA	0.70	-	0.85	V
Transition Frequency		f <sub>T</sub>	I <sub>C</sub> =10mA, V <sub>CE</sub> =10V, f=100MHz	500	-	-	MHz
Collector Output Capacitance		C <sub>ob</sub>	V <sub>CB</sub> =5.0V, I <sub>E</sub> =0, f=1.0MHz	-	-	4.0	pF
Storage Time	KTN2369A	T <sub>stg</sub>	I <sub>C</sub> =100mA, I <sub>B1</sub> =-I <sub>B2</sub> =10mA, V <sub>CC</sub> =10V	-	-	13	nS
Turn-on Time		t <sub>on</sub>	V <sub>CC</sub> =3.0V, I <sub>C</sub> =10mA, I <sub>B1</sub> =3.0mA, I <sub>B2</sub> =-1.5mA	-	-	12	
Turn-off Time	KTN2369A	t <sub>off</sub>	I <sub>C</sub> =10mA, I <sub>B1</sub> =3.0mA, I <sub>B2</sub> =-1.5mA, V <sub>CC</sub> =3.0V	-	-	15	

Note : \*Pulse Test : Pulse Width  $\leq 300\mu\text{s}$ , Duty Cycle  $\leq 2.0\%$